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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,217	07/14/2003	Giuseppe Colombo	09728.0294US01	7019
23552	7590	08/23/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			DAVIS, OCTAVIA L	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/619,217

Applicant(s)

COLOMBO ET AL.

Examiner

Octavia Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4 – 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by McDearmon.

Regarding claims 1 and 6, McDearmon discloses a bearing assembly with sensors for monitoring loads comprising a hub 12 integrally fixed to a radial flange 26, a measuring device M, 70 mounted on a non-rotating part 40 of a vehicle and operatively facing an essentially radial surface secured to the flange, detecting real time variations of the axial position of the surface due to elastic deformation of the flange caused by forces transmitted from the wheel to the hub flange (See Col. 4, lines 4 –11).

Regarding claim 2, the measuring device M, 70 is an optical device and the surface is an optically reflecting surface (See Col. 6, lines 32 – 38).

Regarding claim 5, the measuring device is arranged for carrying out said measuring operation in proximity of the peripheral zone of the hub flange (See Col. 8, lines 1 – 16).

Regarding claim 7, the measuring device M,70 is fixable to a non-rotating race 40 of the bearing 16 (See Fig. 1).

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Regarding claim 9, the measuring device M, 70 is connected to an electronic processing unit and recognizes a condition indicative of an impending loss of adhesion with the road (See Col. 7, lines 2 – 15).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDearmon in view of Ouchi et al.

Regarding claims 3 and 4, McDearmon discloses all of the limitations of these claims except for a teaching that the measuring device includes an emitter means for projecting a light radiation onto reflecting surface and a receiver means for receiving the light radiation reflected back by the reflecting surface. However, Ouchi et al disclose a speed sensing rolling bearing unit comprising a measuring device 6 embedded in a synthetic resin block 21, the device including a light emitter 22a and a light receiver 22b (See Col. 8, lines 37 – 48, See Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McDearmon according to the teachings of Ouchi et al for the purpose of, reliably carrying out rotational speed detection and simple detection signal judgment in relation to a light receiver whose detection signal changes

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based on the passing of a light transparent portion and a passing of a light blocking portion between the light emitter and the light receiver (See Ouchi et al, Col. 6, lines 16 – 22).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDearmon in view of Ouchi et al, as applied to claims 1 – 7 and 9 above, and further in view of Meeker et al.

Regarding claims 8 and 10, McDearmon and Ouchi et al disclose all of the limitations of these claims except for a teaching that the measuring device is connected to an electronic processing unit mounted on board the vehicle and set for automatically controlling, based on the deformation signals received from the measuring device, wearable members of a braking system for adapting their position to the position of a rotor brake rigidly connected to the flange of the hub. However, Meeker et al discloses a vehicle wheel bearing and wheel speed sensor comprising a bearing 10, a sensor 16, 20, 22 for a braking system (See Col. 2, lines 37 – 46), the sensor attached to a computer means 32 and a brake rotor 56 and bracket 30 (See Col. 4, lines 1 – 24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McDearmon and Ouchi et al according to the

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teachings of Meeker et al for the purpose of, providing an improved vehicle bearing wherein a single bracket functions as a shipping shield and aids in reducing the number of needed parts and eliminating the need to discard a part after shipping (See Meeker et al, Col. 5, lines 20 – 27).

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Birkestrand (6,355,996) teaches a motorized wheel hub assembly.

Bigley (5,740,895) teaches an integrated wheel end system.

Deane (5,129,741) teaches a hub assembly for a motor vehicle.

Denny, Jr. et al (6,532,666) teach a process for capturing a bearing race on a spindle.


8. Any inquiry concerning this communication should be directed to Examiner Octavia Davis at telephone number (571) 272 - 2176. The examiner can normally be reached on Monday - Thursdays (9:00 - 5:00), Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for the organization where this application where this application or proceeding is assigned is (703) 872 – 9306.

JP

OD/2855

8/14/04

  
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